

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No:

09/911,119

Filing Date:

July 23, 2001

Title:

APPARATUS AND METHODS

FOR DETERMINING BIOMOLECULAR **INTERACTIONS** 

Group Art Unit: 2876

Examiner: Ahshik Kim

RESPONSE

**Assistant Commissioner for Patents** Washington, DC 20231

## RESPONSE TO THE EXAMINER'S OFFICE ACTION

In reply to the Office Action dated January 21, 2003, designated as Paper No. 8 in the above-captioned application, please enter the following amendments and Remarks as follows:

## In the Claims

Please cancel claims 4, 6, and 7.

Please rewrite claims 1, 5, and 8, according to the following:

A molecular detection apparatus comprising: 1.

a first compartment containing at least a ligand or a receptor;

a second compartment adjacent said first compartment;

a boundary area disposed between said first and second compartments;

a sensing area; and

means for detecting the diffusion of a molecule proximate the sensing area.

The molecular detection apparatus of claim 1, wherein the first compartment contains 5. a matrix material.



The molecular detection apparatus of claim 1, wherein the ligand molecule is smaller 8. than the receptor molecule and wherein the boundary area includes a membrane operative to allow ligand molecules to pass therethrough and to prevent passage of receptor molecules.